

## WHAT IS CLAIMED IS:

1. A process for conducting operating heat of a semiconductor switch to a heating cell which is triggered by the semiconductor switch, comprising the steps of:

providing a cooling fin on the semiconductor switch;

placing said semiconductor switch over a surface of a first heat and current conducting material strip, said first heat and current conducting material strip being electrically connected to a supply voltage;

placing said first heat and current conducting material strip over a surface of a second heat and current conducting material strip with a heat-conducting insulating film located between the first and second heat and current conducting material strips;

placing said second heat and current conducting material strip on a surface of a frame terminal;

providing a heating cell;

electrically and thermally connecting said frame terminal to said heating cell;

placing said frame terminal on a surface of a second heat-conducting insulating film; providing a supply terminal; and then

placing said heat-conducting insulating film on a surface of said power supply terminal.

## 2. A heating element comprising:

a semiconductor switch for triggering a heating element, said semiconductor switch including a cooling fin,

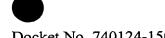
a first heat and current conducting material strip, said first heat and current conducting material strip being electrically connected to a supply voltage and being in contact with a surface of said semiconductor switch;

a second heat and current conducting material strip, said first heat and current conducting material strip being positioned over a surface of said second heat and current conducting material strip;

a first heat conducting thermally insulating film, said first heat conducting thermally insulating film being disposed between said first and second heat and current conducting material strips;

a heating cell;

BEST AVAILABLE COPY



a frame terminal, said frame terminal being electrically and thermally connected to said heating cell, said heat and current conducting material strip being positioned over a surface of said frame terminal:

a power supply terminal; and

- a second heat conducting thermally insulating film, said second heat conducting thermally insulating film being disposed between said frame terminal and said power supply terminal.
- 3. The heating element as claimed in claim 2, wherein said first heat and current conducting material strip and said second heat and current conducting material strip each comprise electrocopper.
- 4. The heating element as claimed in claim 3, wherein said electrocopper has a thermal conductivity  $\lambda = 400 \text{ W/mK}$  and a thickness of 1.0 mm.
- 5. The heating element as claimed in claim 4, wherein said frame terminal comprises electrocopper.
- 6. The heating element as claimed in claim 5, wherein said electrocopper has a thermal conductivity  $\lambda = 400 \text{ W/mK}$  and a thickness of 1.0 mm.
- 7. The heating element as claimed in claim 5, wherein said power supply terminal comprises nickel-plated brass.
- The heating element as claimed in claim 3, wherein said power supply 8. terminal comprises nickel-plated brass.